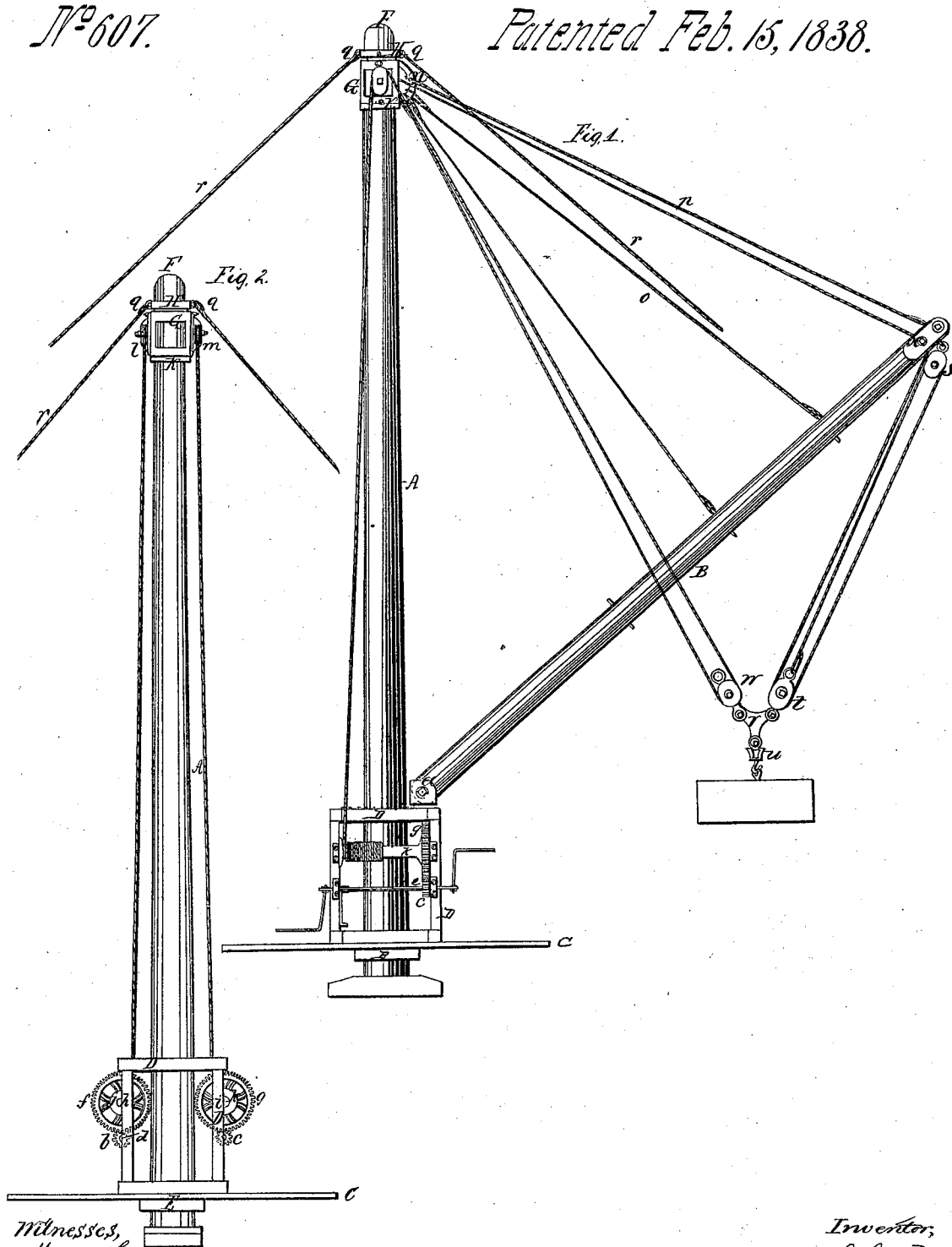


# *J. S. Savage, Derrick.*

*N<sup>o</sup> 607.*

*Patented Feb. 15, 1838.*



*Witnesses,  
Mary Savage  
John A. Smith & Co*

*Inventor,  
James S. Savage*

# UNITED STATES PATENT OFFICE.

JAMES S. SAVAGE, OF BOSTON, MASSACHUSETTS.

## BOOM-DERRICK FOR HOISTING AND LAYING STONE AND OTHER MATERIALS.

Specification of Letters Patent No. 607, dated February 15, 1838.

*To all whom it may concern:*

Be it known that I, JAMES S. SAVAGE, of Boston, county of Suffolk and State of Massachusetts, have invented, made, and applied to use new and useful Improvements in Machines Used for Hoisting and Laying Stone and other Purposes, usually known by the name of "Boom-Derricks."

The disposition, arrangement and use of the several parts of these improvements, the principle thereof, and the several modes in which I have contemplated the application of that principle or character by which it may be distinguished from other inventions, together with those parts, improvements or combinations, which I claim as my inventions and discoveries, I have fully set forth and described in the following specification and annexed drawings.

Plate I represents a side elevation of the derrick, exhibiting the machinery, boom and hoisting ropes and guys. Plate II is the other side view, taken at right angles to the plane of the boom and mast.

A, Plates 1 and 2, represents the mast and B the boom, constructed of any suitable timber.

C is a platform for the workmen to stand on while operating the derrick.

The frame work D D for supporting the barrels and machinery is constructed as represented in the drawings, or in any other convenient manner.

The lower end or foot of the boom B rests and turns in a step of metal *a* attached to the top of the framework D D.

On two opposite sides of the framework, pinions *b*, *c*, on shafts *d*, *e*, revolving in proper bearings, connect with cogged wheels *f*, *g*, on shafts *h*, *i*. Each of the shafts *h*, *i* passes through barrels *j*, *k*, on which the operating ropes are wound, and unwound. Each of the shafts *d*, *e*, has a crank on each end thereof to which the moving power is applied.

The platform C and framework thereon rest on the shoulder E, which shoulder is formed round and attached to the lower part of the mast. The framework D D and platform have suitable collars and washers of metal between the same and the mast, to

prevent wear of the parts, and facilitate their operations.

A metallic hood or cap F, having a projecting rim or shoulder *l* is placed on the top of the mast. Around the hood or cap, the metallic sheave frame G moves. This frame may be constructed as represented in the drawings, or in any other suitable manner; its object being to support the sheaves *l*, *m*, and by means of the eye *n*, and ropes *o* or *p*, to support the boom B, and to sustain it at a certain angle of inclination.

H is a circular annulus or ring around the hood or cap F. This ring rests on a shoulder of the hood or cap F, and has three or more eyes *q*, *q*, *q*, affixed to it, from which the guy ropes *r*, *r*, *r* radiate to different points on the ground.

To the end of the boom B is hung the block *s*, which communicates with the block *t*, to which the hook *u* is connected, which hooks into the eye of the lewis inserted in the block of stone to be raised. Between the block *q* and hook *u* is a triangular shaped piece of metal *v*, to which another block *w* is attached. The rope for raising the stone passes from the barrel *j* over the sheave *l* to a sheave *x* in the end of the boom; from thence, through the block *t* and *s* to the eye of the top of the block *t*, where it is fastened. The object of the other barrel *k* and its machinery is to draw the stone sidewise toward the mast, which it does by its rope passing over the sheave *m*; from thence under the sheave in the block *w* to the eye *n*, to which the end is fastened.

The motion of the platform C around the mast, the machinery for hoisting the stone, and that for drawing it sidewise toward the mast, together enable the workmen to place the stone in any desired situation with much more certainty and facility than by the ordinary "boom derrick."

Having herein described many parts of machinery generally used in the construction of a hoisting apparatus of the above kind, together with other new and useful additions thereto, I claim as my inventions and improvements—

The combination of the whole machinery

as above described for the purpose of hoisting stone or other bodies; and separately, I claim the second set of machinery and rope or ropes, to act on the stone or other body, and draw it in a direction toward the mast.

In testimony that the above is a true specification of my said inventions and improvements, I have hereunto set my hand

this thirtieth day of January in the year of our Lord one thousand eight hundred and thirty seven.

JAMES S. SAVAGE. [L. s.]

Witnesses:

R. H. EDDY,  
OTIS TUFTS.